

What is claimed is:

1. An access point providing a wireless local area network connection to a terminal device, for the purpose of connecting the terminal device to a wide area network, the access point comprising:
  - an antenna unit that sends and/or receives a radio frequency signal used for exchanging information via the wireless local area network;
  - a signal conversion unit that performs conversion between the radio frequency signal and a digital signal as the information;
  - 10 an information processing unit that executes processing of the digital signal based on a communication protocol for exchanging of the information;
  - an antenna case that contains the antenna unit and the signal conversion unit;
  - a main unit case that, separated from the antenna case, contains the information processing unit; and
  - 15 a wired cable that, connecting the antenna case and the main unit case, performs transmission the digital signal between the signal conversion unit and the information processing unit.
- 20 2. An access point according to claim 1, wherein the signal conversion unit comprises:
  - a frequency conversion unit that performs conversion between the radio frequency signal and an intermediate frequency signal having lower frequency than the radio frequency signal;
  - 25 a modem unit that performs modulation and/or demodulation between the intermediate frequency signal and a base band signal; and

a base band unit that performs conversion between the base band signal and the digital signal.

3. An access point according to claim 1 or 2, wherein the  
5 transmission of the digital signal by the wired cable is either one of serial transmission and parallel transmission.

4. An access point according to any of claims 1 to 3, wherein the  
wired cable, in addition to transmission of the digital signal, performs at least  
10 one of transmission of a control signal and power supply, for at least one of the antenna unit and the signal conversion unit.

5. An access point according to any of claims 1 to 4, wherein the  
wired cable is coaxial cable.

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6. A method for exchanging signals at an access point providing a wireless local area network connection to a terminal device, for the purpose of connecting the terminal device to a wide area network, the method comprising:

20 disposing an information processing unit in a main unit case, wherein the information processing unit executes processing of a digital signal based on a communication protocol used by the wireless local area network;

disposing a signal conversion unit in an antenna case separated from the main unit case, wherein the signal conversion unit performs conversion  
25 between the digital signal and a radio frequency signal which an antenna unit sends and/or receives over the wireless local area network;

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connecting the main unit case and the antenna case via a wired cable;  
and

transmitting the digital signal according to the protocol of the local  
area network via the wired cable.